

REMARKS

I. Status of the Claims

Claims 1-36 are pending in the application. Claims 1-20, 23-31 and 35 are allowed. Claims 21, 22, 32, 33, and 36 are amended.

Applicant has amended claim 33 for clarity by deleting the words "first" and "second." It is believed that their deletion in no way narrows the scope of claim 33.

Claim 36 has been amended for clarity by replacing the word "reaching" with the word "reading." Support for this amendment can be found in the specification at p. 5, line 8. This amendment corrects a typographical error and in no way narrows the scope of claim 36.

Applicant has also amended claim 32 for clarity. Claim 32 as amended now recites "at least one dimension of each well of the multi-well plate having a level of error of no more than about 0.5 %." Support for this amendment can be found in the specification at p. 9, line 6 to page 10, line 14 ("In another embodiment, greater accuracy is obtained by accurately measuring at least one dimension."). No new matter has been added.

II. Objection to the Specification

The Examiner objects to the specification because it does not discuss element 60 in Figure 4. Office Action at p. 8. Applicant has amended the specification to refer to element 60, an air bubble or gas in an area adjacent to cap 58. Accordingly, Applicant respectfully submits that the objection has been obviated.

III. Rejections under 35 U.S.C. § 112, second paragraph

Claims 21, 22, and 32-34 are rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. *Office Action* at pp. 2-3. Applicant respectfully traverse this rejection.

Regarding claims 21, 22 and 32, the Examiner objects to the term "accuracy of 'no more than' either 0.1% or 0.5%," as it could mean "99.5% inaccurate or more." *Id.* at p. 2. The Examiner concedes, "[t]hose reading the claim language and the Specification would likely assume that this latter interpretation was not intended." *Id.*

Applicant respectfully submits that one of ordinary skill in the art would understand that in light of the teachings of the specification, the term "level of accuracy to no more than 0.5%" means that the level of error in at least one dimension of each well of the multi-well plate is no more than 0.5%. Nevertheless, to expedite prosecution, Applicant has amended claims 21, 22 and 32, as well as the specification (at p. 4, paragraph 2, p. 9 paragraph 4; p. 10, paragraph 1, and p. 12, paragraph 3), by replacing the word "accuracy" with "error." Applicant believes that these amendments do not narrow the scope of the claims in any way, nor do they constitute new matter. The specification supports these amendments on p. 10, paragraph 1, which explains that an error of 1% in measurement of a dimension of a well results in a 2% error in the calculated volume.

Claims 32 and 33 are rejected for omitting a structural cooperative relationship between the sample solution and the blank solution. *Office Action* at pp. 2-3. Applicant respectfully traverses this rejection.

Regarding claim 33, Applicant submits that a cooperative relationship between the sample and the blank is found in the claim language itself. A separate blank

solution free of the first chromophore and including the second chromophore is provided in a concentration equal to that in the sample solution. The use of a blank solution including the second chromophore prevents significant inaccuracies in measuring the maximum absorbance of the first chromophore in the sample solution. See *specification* at p. 14, paragraph 2. Thus, the cooperative relationship can be appreciated when reading the claim in light of the teachings of the specification, which is permissible.

Claim 32 has been amended to provide a cooperative relationship between the sample solution and the blank solution by adding the language "in a concentration equal to in the sample solution." This language is similar to that present in claim 33, which the Applicant maintains provides a sufficient cooperative relationship between the sample solution and the blank solution. No new matter has been added by this amendment.

Claim 34 is rejected for lacking antecedent basis for a gas in the specification. Accordingly, the specification has been amended to describe a cell that can include a gas or an air bubble, *i.e.*, "[p]referably, each well includes a gas or an air bubble ..." No new matter has been introduced since "a gas" was recited in claim 34 in the application as originally filed. Applicant respectfully submits that the term "a gas" in claim 34 now has antecedent basis in the specification.

Accordingly, Applicant respectfully requests that the rejections under § 112, second paragraph, be withdrawn.

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IV. Rejections under U.S.C. 103(a)

Claims 32-34 and 36 are rejected as being unpatentable over U.S. Pat. No. 5,298,978 ("Curtis"). *Office Action* at p. 4. Applicant respectfully traverses this rejection.

In order to establish a prima facie case of obviousness, an Examiner must demonstrate that there is some suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. See MPEP § 2143. Moreover, the prior art reference must teach or suggest all of the claim limitations. *Id.*

Independent claim 32 is directed to a system comprising a plurality of sample solutions, each sample solution including a first chromophore and a second chromophore. Independent claim 33 is directed to a system comprising a set of sample solutions, each including a first chromophore and a second chromophore.

The Examiner asserts that in Curtis, "the reference solution contains a chromophore copper sulfate and the sample solution contains a red chromophore." *Office Action* at p. 4.

Applicant respectfully submits that Curtis describes a method and apparatus for determining the volume of a pipette using a photometer by using only one chromophore in a sample solution. Curtis does not teach or suggest any modification of its system to include a second chromophore in the sample solution. Moreover, Curtis does not provide any rationale for adding a second chromophore, nor does Curtis teach any method of calculating a volume by using two chromophores in a sample solution.

Claim 36 is directed to computer-executable software code stored on a computer-readable medium comprising code for calculating a liquid volume of a sample solution based upon a photometric reading of absorbance, a concentration of a chromophore in the sample solution, a path length dimension of a sample holder, and a quantification of a non-linearity. The Examiner rejects claim 36 because although "Curtis does not explicitly disclose that the calculations are based directly on the absorbance of the sample . . . it would have been obvious to those skilled in the art at the time of the invention, since the disclosure provides that the sample solution includes a chromophore component, the absorbance of which would be known." *Office Action* at pp. 6-7.

Applicant respectfully submits that Curtis does not teach or suggest computer-executable software code, much less a computer-executable software code comprising all the limitations of claim 36.

Because Curtis does not suggest each limitation of the present claims, Applicant respectfully submits that a *prima facie* case of obviousness has not been established. Accordingly, Applicant respectfully requests withdrawal of this rejection.

V. Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

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Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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